

REMARKS

In response to the Final Office Action mailed March 30, 2005, Applicants respectfully request reconsideration. To further the prosecution of this application, Applicants have amended the claims and submit the following remarks.

Applicants respectfully requests entry of this Amendment, which is believed to comply with 37 C.F.R. § 1.116. Admission of the amendments made herein is believed to be proper, as the amendments place the application into allowable condition or at least present the rejected claims in better form for consideration on appeal.

I. Telephone Conference with Examiner

Applicants' representatives thank Examiner Ho for his courtesy in granting and conducting a telephone conference on May 31, 2005. The substance of the telephone conference is summarized herein.

II. Rejections under 35 U.S.C. §112

Claims 1-7, 10-24, 26, 27, and 29 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. Specifically, the Office Action asserts that three possible arrangements are encompassed by the recitation of "at least a portion of the multiple energy x-ray device is not common to the computed tomography device," and that only two of such arrangements are described in the specification. In particular, the Office Action asserts that the specification does not disclose that the multiple energy device may share a portion, but not all, of the computed tomography device. As discussed below, Applicants believe that this arrangement is, in fact, disclosed in the specification. Further, Applicants disagree that there is a proper legal basis for the rejection.

At page 7, lines 7-10, the specification states: "Data processing may occur in an external processor, or may occur internal to each of prescanner device 1 and CT scanner device 3." Thus, the specification discloses that the multiple energy device may share a portion (i.e., the processor), but not all, of the computed tomography device.

Further, Applicants disagree with the propriety of the rejection of claims 1-7, 10-24, 26, 27, and 29 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. A claim that is broader than any particular embodiment shown in the patent specification satisfies §112, first paragraph, except in the rare instance when the specification explicitly limits the invention to a much narrower scope. *See Cordis Corp. v. Medtronic Ave, Inc.*, 339 F.3d 1352, 1365 (Fed. Cir. 2003) (claim held valid: “[a]n applicant is not required to describe in the specification every conceivable and possible future embodiment of his invention.” ... “A specification may, within the meaning of 35 U.S.C. §112 para. 1, contain a written description of a broadly claimed invention without describing all species that [the] claim encompasses.”). In view of the foregoing, the specification satisfies the written description requirement for claims 1-7, 10-24, 26, 27, and 29, such that the rejection of these claims under §112, first paragraph, is improper and should be withdrawn. Accordingly, withdrawal of the rejection is respectfully requested.

Claim 15 is also rejected as failing to comply with the written description requirement because the specification allegedly does not disclose that the computed tomography device may share a portion of the multiple energy x-ray device. The same arguments discussed above also apply to this separate rejection of claim 15, such that the rejection of this claim under §112, first paragraph, is also improper and should be withdrawn.

III. Objections to the Drawings

The drawings are objected to under 37 C.F.R. § 1.83(a) as allegedly failing to show every feature of the invention specified in the claims. During a telephone conference on May 31, 2005, the Examiner indicated that the objection to the drawings is related to the rejection under 35 U.S.C. §112 addressed in connection with claims 1-7, 10-24, 26, 27, and 29.

For the reasons discussed above, Applicants believe it is permissible for a specification to contain a written description of a broadly claimed invention without describing all species that the claim encompasses. Accordingly, it is not believed to be necessary to illustrate all species encompassed by a claim.

If the Examiner disagrees, Applicants would be happy to amend the drawings to show the configuration described above (i.e., data processing for the prescanner device 1 and CT scanner device 3 may occur in an external processor). If the Examiner would like Applicants to do so, he is invited to contact Applicants' representatives to request such action.

IV. Prior Art Rejections

A. Independent Claim 1

Independent claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Krug (U.S. Patent No. 5,838,758) (page 4 of the Office Action). Claim 1 is also rejected under 35 U.S.C. §103(a) as being obvious over Peschmann (U.S. Patent No. 5,367,553) in view of Krug (page 12 of the Office Action). Each of these rejections is based in part on the Examiner taking the position that the positional information transmitted in Krug from dual energy x-ray inspection device 1000 to the CT scanner 1002 is "information indicative of effective atomic number characteristics" of an object.

During the telephone conference, the Examiner indicated that he appreciated the concept that Applicants' are trying to capture in claim 1, but questioned whether the "information indicative of effective atomic number characteristics" of claim 1 could be read broadly enough to cover positional information. Applicants' representatives indicated that they believed it could not, but that they would be happy to make clear in the record that Applicants do not consider positional information to be indicative of effective atomic number characteristics because positional information does not serve to indicate anything about effective atomic characteristics of an object that is prescanned. The Examiner is invited to suggest clarifying language if the Examiner believes it is necessary, but Applicants believe that the claims and the record are clear in this regard.

In view of the foregoing, it is respectfully asserted that the cited references, either alone or in combination, do not disclose or suggest the step of transmitting information indicative of effective atomic number characteristics of an object to a processor coupled to a computed tomography device as recited in claim 1, wherein the at least a portion of the multiple energy x-

ray device is not common to the computed tomography device. Accordingly, withdrawal of these rejections is respectfully requested.

Claims 3-7, 15-17, and 21-24 depend from claim 1 and are allowable for at least the same reasons.

B. Independent Claim 8

Independent claim 8 is rejected under 35 U.S.C. §103(a) as being obvious over Krug in view of Tuy (U.S. Patent No. 5,243,664) (page 9 of the Office Action). Claim 8 is also rejected under 35 U.S.C. §103(a) as being obvious over Peschmann (U.S. Patent No. 5,367,553) in view of Krug and Tuy (page 16 of the Office Action).

During the telephone conference, Applicants' representatives discussed with the Examiner the arguments for claim 8 made in the response mailed on January 7, 2005, which is incorporated herein by reference. The Examiner indicated that he understood the distinction highlighted by Applicants' representatives (i.e., that Tuy discloses performing a metal artifact correction based solely on original CT data and not based on any prescan data), but questioned whether the phrase "based on the prescan information" could be read to mean simply that the computed tomography scan data is based on the prescan information, rather than the intended meaning that the metal artifact correction is performed (on the computed tomography scan data) based on the prescan information. Applicants' representatives indicated that they would amend claim 8 to clarify this distinction.

Accordingly, claim 8 has been amended to recite performing a metal artifact correction on the computed tomography scan data, *wherein the prescan information is used to perform the metal artifact correction on the computed tomography scan data*. Accordingly, claim 8 is believed to be in condition for allowance and withdrawal of the rejections of claim 8 is respectfully requested.

Claims 9 and 25 depend from claim 8 and are allowable for at least the same reasons.

C. Independent Claim 10

Independent claim 10 is rejected under 35 U.S.C. §102(b) as being anticipated by Krug (page 4 of the Office Action) and under 35 U.S.C. §103(a) as being obvious over Peschmann in view of Krug (page 12 of the Office Action).

Similar to claim 1, claim 10 provides that “information indicative of effective atomic number characteristics” is “transmitted from the multiple energy prescanner.” Accordingly, claim 10 is allowable for substantially the same reasons as discussed in connection with claim 1.

Claims 11-13, 18-20, and 26 depend from claim 10 and are allowable for at least the same reasons.

D. Independent Claim 14

Independent claim 14 is rejected under 35 U.S.C. §102(b) as being anticipated by Krug (page 4 of the Office Action) and under 35 U.S.C. §103(a) as being obvious over Peschmann in view of Krug (page 15 of the Office Action).

Claim 14 provides that “information indicative of at least one metal artifact is transmitted from the multiple energy prescanner to a processor coupled to the computed tomography device.” Similar to claims 1 and 10, Applicants make clear for the record that positional information is not indicative of at least one metal artifact, because positional information does not serve to indicate anything about one or more metal artifacts of an object that is prescanned. Again, the Examiner is invited to suggest clarifying language if the Examiner believes it is necessary.

In view of the foregoing, the cited references, either alone or in combination, do not disclose or suggest an apparatus wherein information indicative of at least one metal artifact is transmitted from a multiple energy prescanner to a processor coupled to the computed tomography device, as recited in claim 14. Accordingly, withdrawal of these rejections is respectfully requested.

Claim 27 depends from claim 14 and is allowable for at least the same reasons.

E. Independent Claim 28

Independent claim 28 is rejected under 35 U.S.C. §103(a) as being obvious over Krug (page 10 of the Office Action).

During the telephone conference, Applicants' representatives explained an intended distinction between claim 28 and the cited reference, Krug. Specifically, Applicants' representatives explained that Krug teaches transmitting positional information that is used only to determine a portion of the object to be scanned by the computed tomography device, whereas claim 28 relates to using received information for another purpose. The Examiner indicated that he appreciated this distinction, but that he believed it should be clarified in the claims. Accordingly, claim 28 has been amended to recite "using the information received at the device to *process scan data generated by a computed tomography device.*" Since Krug discloses no other use for the transmitted positional information other than determining a portion of an object to be scanned, the claim as amended clearly distinguishes over the situation proposed in the rejection wherein the information is used to determine a portion of the object to be scanned, and the resulting CT image is then used to make a threat determination.

In view of the foregoing, the cited references, either alone or in combination, do not disclose or suggest using the information received at the device to process scan data generated by a computed tomography device, as recited in claim 28. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 29-36 depend from claim 28 and are allowable for at least the same reasons.

Serial No.: 10/717,051
Conf. No.: 7442

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CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
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Docket No. L0632.70001US04
Date: May 31, 2005
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